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Prep: 3<sup>rd</sup> period, 9:05am-9:50am

Help Hours:

Before or after school **by appointment**



## General Science 9: Syllabus

Mr. Wallace [www.wallacegensci9.wikispaces.com](http://www.wallacegensci9.wikispaces.com)

**What is a Syllabus:** A syllabus is an outline and summary of topics to be covered in an educational or training course. A syllabus is meant to provide students receiving the education or training with a knowledge of what to expect, starting and ending points.

### Course Outline

General Science 9 is composed of four science disciplines:

- Geology MP1
- Meteorology MP2
- Astronomy MP3
- Ecology MP4

\*Note: Although each discipline is addressed in separate marking periods, assignments pertaining to learning targets from a discipline other than the one currently at hand will occur. Retention of previously learned science concepts is paramount.

### Geology Learning Targets:



#### Latitude / Longitude (Cartography)

- Reading latitude & longitude from variety of maps

#### Map Scale (Cartography)

- Map scale with real distances

#### Topographic Maps

- Reading topographic maps

#### Matter & Minerals

- Periodic tables
- Mineral characteristics
- Mineral classification
- Mineral identification

#### Rocks

- Rock types
- Rock cycle

- Rock identification

#### Continental Drift

- Earth structure
- Theory of continental drift

#### Theory of Plate Tectonics

- Theory of plate tectonics
- Sea-floor spreading
- Plate boundaries

#### Seismology

- Earthquake causes
- Seismic waves
- Hazards

#### Volcanology

- Causes
- Types of volcanoes
- Volcanoes and landforms

## Earth's History

- Fossils & layers to determine past
- Carbon dating
- Time scale

## Meteorology Learning Targets:

### Atmosphere Characteristics

- Atmospheric structure
- Atmosphere characteristics

### Heating the Atmosphere

- Heat transfer mechanisms
- Heat transfer in the atmosphere

### Climate Controls

- Compare and contrast factors that affect climate
- Seasonal changes

### Climate Changes

- Natural processes that change climate
- Global warming
- Compare and contrast climate change, global warming, and greenhouse effect

### Pressure & Winds



- Definition of pressure
- Pressure centers
- Wind (global & local)

### Air Masses & Fronts

- Air mass types
- Front types

### Weather Maps & Prediction

- Reading weather maps
- Making weather maps
- Using maps to predict weather

### Severe Storms

- Winter Storms
- Hurricanes
- Tornadoes

### Water in the Atmosphere

- States of matter
- Humidity
- Cloud formation

## Astronomy Learning Targets:

### Introductory Concepts:

- What is Astronomy?
- Scale of the Cosmos
- Scientific Notation
- Concept of Space and Time

### History of Astronomy

- Practice of Astronomy throughout different periods in human history
- Cosmological Views and Contributions of Ancient Cultures, The Greeks (Golden Age) and of famous Early Astronomers (Renaissance Period)
- Evolution of Our Understanding of the Universe



### **Newton's Gravity**

- Properties of Gravity
- Newton's Laws & The Law of Universal Gravitation

### **Earth-Moon-Sun System (EMS)**

- Earth Motions
- Lunar Motions
- Lunar Surface/History

### **The Celestial Sphere**

- Motions of the Sky & The Celestial Sphere
- Constellations & Mapping the Sky

### **The Study of Light**

- Electromagnetic Spectrum/Radiation
- Spectroscopy
- Doppler Effect

### **Tools for Studying Space**

- Refracting Telescopes
- Reflecting Telescopes
- Radio Telescopes

- Special Telescopes

### **The Sun**

- Structure/Organization
- Solar Activity
- Solar Interior

### **Stellar Properties & Stellar Evolution**

- Stellar Characteristics
- Measuring Distance
- Stellar Brightness
- H-R Diagram
- ISM
- Star Birth
- Main Sequence
- Burnout and Death
- Stellar Remnants

### **Galaxies/Cosmology & SETI**

- Types of Galaxies
- The Universe
- Search for Extraterrestrial Intelligence

## **Ecology Learning Targets:**



### **Biomes & Biotic/Abiotic Factors**

- Earth's Major Biomes
- Levels of Organization
- Aquatic & Terrestrial ecosystems

### **Limiting Factors**

- Limiting factors & carrying capacity
- Ecological succession
- Cedar Glade Lab

### **Food Webs & Energy in an Ecosystem**

- Food chains/food webs
- Food Web Matching Activity
- Owl Pellet Lab

### **Biodiversity**

- Interactions among organisms
- Threats to biodiversity

### **Populations**

- Ecological footprint
- Human Population Growth & Impact

## Cycles of Matter

## Textbooks

- Prentice Hall Earth Science – Tarbuck & Lutgens 2009
- Holt McDougal Environmental Science – Heithaus & Arms 2013
- \*Various other textbooks will be references

\*Note – all textbooks are to be kept in the classroom. Students may not take any textbooks home. Students may make photocopies of textbook material should they wish to do so. All textbooks can be accessed online.

## Online Resources

- [www.wallacegensci9.wikispaces.com](http://www.wallacegensci9.wikispaces.com) and links contained within

## Classroom Policies

- Absolutely **NO GUM**. You will receive one warning after the first day, and it will be noted in our seating chart by your name. Beyond the first and only warning, detentions will be awarded to students who neglect this rule.
- **Disrespect, harassment, disobedience, bullying, inappropriate behavior - ZERO TOLERANCE**. Education is a privilege and there are many who do not have the opportunity to learn in a school like you do. If you cannot control your actions and behavior, then you will not be with us long.
- **Recycle!** Paper, plastic, cans, glass, metal are all recycled in room 123. Please find the appropriate receptacles near the entrance to the room.
- Unless given permission, **cellphones/iPods/MP3 etc.** devices must remain turned off and out of sight. If you neglect this rule, your device must be surrendered to the office until the end of the day.
- Healthy snacks and drinks are allowed if appropriate.
- Do NOT be **late to class** without a verified excuse note. Neglecting this rule can result in teacher assigned detention, disciplinary referral, etc.
- **Leaving the classroom:** You have 5 min. between each class during your day – the FC is not very large, thus there will be NO BATHROOM OR DRINK VISITS given unless your situation is an emergency. To leave the room, you must have your agenda book, it must be properly filled out and you must sign-out and back in on the classroom log. Your agenda is your responsibility! If you lose it, you must purchase a new agenda.
- **NO Hats/Hoods on heads**
- **Please keep desks and room materials orderly and neat after your usage.**
- **Be prepared with your notebook, pencil and any handouts every day!**

- **Become familiar with classroom resources and when to use them. You do not have to ask me to use many of the materials – they are there for you!**

## **Grading**

Grades are reported quarterly. Each marking period grade is determined using a **points earned / points possible** grading system. Graded assignment point values and weights will vary. Final grade for the year will be determined by averaging the four marking period grades and incorporation of final exam score. Throughout each marking period, students will be graded on the following:

- |   |                                |
|---|--------------------------------|
| ✓ Homework (completion and/or accuracy) | ✓ Final Exam                   |
| ✓ Notebook                              | ✓ Projects/Writing Assignments |
| ✓ Quizzes                               | ✓ Labs                         |
| ✓ Tests                                 | ✓ Class Participation          |

Other Info:

- Passing Grade = 65%
- Late Work – 10% deduction per each day late
- Report Card will include Percentage and Letter Grade (A, B, C, D, F)
- Grade Scale:
  - A: 100 – 90
  - B: 89 – 80
  - C: 79 – 70
  - D: 69 – 65
  - F: 64 – 50
- Student work to improve knowledge/skills:
  - a. May only be done within a given marking period.
  - b. Teachers will provide multiple assessment opportunities, using multiple modalities, to determine a student's understanding/skill level and to assign a final grade.
  - c. If a reassessment is provided to change a grade on a given assessment, the highest score that can be earned is a 70%.
- Graded Assignment Weights:
  - Major Assignments (projects, writing assignments, research, labs, etc) 30%
  - Minor Assignments (worksheets, class work) 20%
  - Homework 10%
  - Assessments (Tests/Quizzes) 40%

## **Homework/Assessments**

- **Homework** will serve as one or more of the following:
  - Preview: to prepare the student for an upcoming lesson/activity
  - Practice: To reinforce and practice the concepts related to learning targets taught in the classroom

- Evidence: To show the student's level of understanding for one or more learning targets
- **Missing assignments** will be noted and must be completed prior to summative assessment for that Learning Target. I will not seek your missing assignments; it is the student's responsibility to present late work or missing assignments to Mr. Wallace.
- **Quizzes/Tests** – you will have them, be well prepared by reading/viewing/reviewing the assigned material and content.

## **Materials**

- Science folder (something to keep handouts and notebook in). A simple 1'' three ring binder will be fine.



- Composition Notebook



- Pencil
- Failure to come to class prepared with these items will result in poor class participation scores, which will ultimately impact your overall grade.